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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/814,427

03/31/2004

Craig I. Walker

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07/27/2006

MORRISS O'BRYANT COMPAGNI, P.C.

136 SOUTH MAIN STREET

SUITE 700

SALT LAKE CITY, UT 84101

EXAMINER

NGUYEN, NINH H

ART UNIT

PAPER NUMBER

3745

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/814,427

Applicant(s)

WALKER ET AL.

Examiner

Ninh H. Nguyen

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-17 and 21 is/are rejected.
- 7) ☒ Claim(s) 8 and 18-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2006 and 19 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

This Office Action is in response to the Request for Continued Examination (RCE) dated 05/03/06.

Response to Arguments

1. After considering Applicant's arguments along with the independent claims 1 and 11, and further assuming that the centerline lies on a plane perpendicular to the central axis 32, and the limitation of at least one vane extending radially in length from a central axis of the impeller to an outer peripheral edge of the impeller means the vane, whether being curved or straight, has a length projected in the radial direction and the centerline extends along this length in radial direction, it is determined that there is enough information disclosed for a person having ordinary skill in the art to make and use of the invention. Therefore, the objection to the specification and the rejection of the claims based on 35 USC § 112 first paragraph are hereby withdrawn.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the at least one vane extending radially in length from a central axis as recited in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

Art Unit: 3745

even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hopfensperger (4,761,115).

Hopfensperger discloses an impeller (Fig. 1) comprising at least one vane 4 extending radially in length from near a central axis of the impeller to an outer peripheral edge of the impeller and having a centerline extending along the radial length which is perpendicular to the central axis of the impeller (a radial line from the center of hub 3 to the outer edge of blade 4)

Art Unit: 3745

and the at least one vane having an outer terminal end at or near the peripheral edge of the impeller, the outer terminal end having an outwardly extending portion being convex-like shape.

5. Claims 1- 4, 6, 10-15, 17, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by James (4,781,5313).

James discloses an impeller (Fig. 1) comprising at least one vane (having leading edge 37a) extending radially in length from near a central axis of the impeller to an outer peripheral edge of the impeller and having a centerline extending along the radial length which is perpendicular to the central axis of the impeller (see marked up Fig. 1 at the end of this Office Action) and the at least one vane having an outer terminal end at or near the peripheral edge of the impeller, the outer terminal end having an outwardly extending portion being convex-like shape;

wherein the impeller further comprising at least one shroud (shown at 37) having a peripheral edge defining the peripheral edge of the impeller, the at least one vane extending outwardly from the shroud (Fig. 1);

wherein the outwardly extending portion has a terminus and a radius R_v (see marked up Fig.1) measured from the central axis of the impeller to the terminus, and wherein the shroud has a radius R_s , measured from the central axis to the peripheral edge, wherein R_v is equal R_s ;

wherein the outer terminal end of the at least one vane further comprises a portion having a radius R_B , where R_B is less than R_s (see marked up Fig. 1)

wherein the outwardly extending portion has an outer edge which is formed by the intersection of at least two lines (Fig. 1);

Art Unit: 3745

wherein the at least one vane A has a width W_v (see marked up Fig. 1) and wherein the outwardly extending portion has a width W_p where W_p is equal to W_v ;

wherein the at least one shroud has a radius R_s measured from the central axis to the peripheral edge, and wherein the outwardly extending portion has a terminus and a radius R_v measured from the central axis of the impeller to the terminus and the outwardly extending portion has axial ends defining a radius R_B measured from the at least one axial end to the central axis, wherein R_B is less than R_v and R_s , and R_v is less than R_s (see markup Fig. 1).

Regarding claims 12, 14, 15, and 17 the impeller further comprising a second shroud (shown at 33) positioned substantially parallel to and spaced from the shroud and wherein the at least one vane extends between the spaced apart shroud;

wherein the outer terminal end of the at least one vane further comprises a portion having a radius R_B , wherein R_B is less than R_s ;

6. Claims 1-5, 7, 9, 11, 12, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Trumpler (2,471,174).

Trumpler discloses an impeller (Figs. 1, 2) comprising at least one vane 3 extending radially in length from near a central axis of the impeller to an outer peripheral edge of the impeller and having a centerline extending along the radial length which is perpendicular to the central axis of the impeller (see marked up Fig. 1 at the end of this Office Action) and the at least one vane having an outer terminal end at or near the peripheral edge of the impeller, the outer terminal end having an outwardly extending portion being convex-like shape (edge 3a);

Art Unit: 3745

wherein the impeller further comprising at least one shroud 1 having a peripheral edge defining the peripheral edge of the impeller, the at least one vane 3 extending outwardly from the shroud (Fig. 1);

wherein the outwardly extending portion has a terminus and a radius R_v (see marked up Fig.1) measured from the central axis of the impeller to the terminus, and wherein the shroud has a radius R_s , measured from the central axis to the peripheral edge, wherein R_v is greater than R_s ;

wherein the outer terminal end of the at least one vane further comprises a portion having a radius R_B where R_B is equal to R_s (see marked up Fig. 1);

wherein the outwardly extending portion is arcuate in shape (Fig. 1);

wherein the at least one vane A has a width W_v (see marked up Fig. 1) and wherein the outwardly extending portion has a width W_p where W_p is less than or equal to W_v .

Regarding claim 12, the impeller further comprising a second shroud 2 positioned substantially parallel to and spaced from the shroud and wherein the at least one vane extends between the spaced apart shroud.

Allowable Subject Matter

7. Claims 8, 18, 19, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. This is a Request for Continued Examination of applicant's earlier Application No. 10/814,427. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

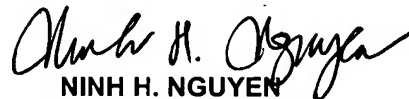
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

Art Unit: 3745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).


NINH H. NGUYEN
PRIMARY EXAMINER

Nhn
July 24, 2006

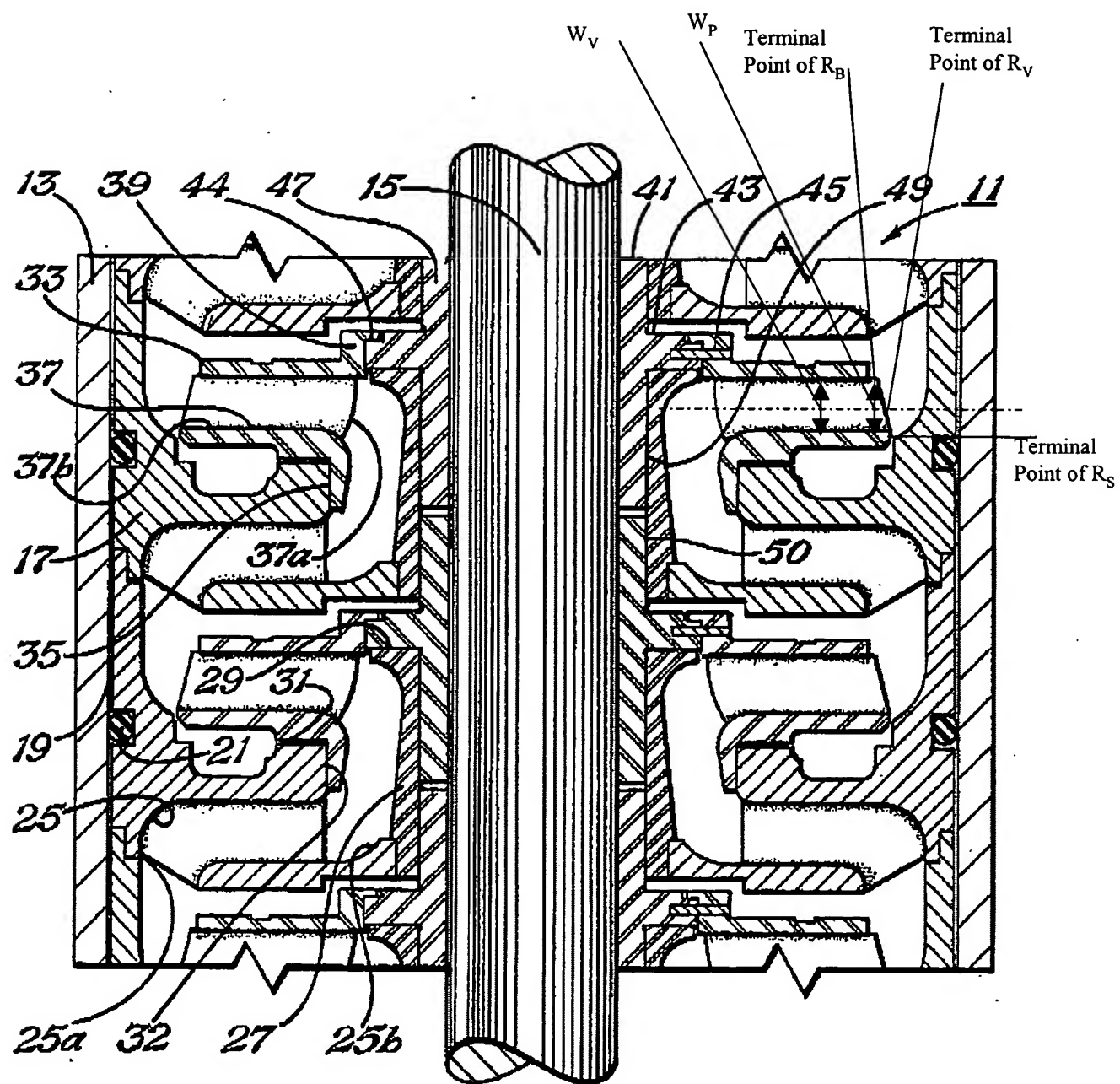


Fig. 1

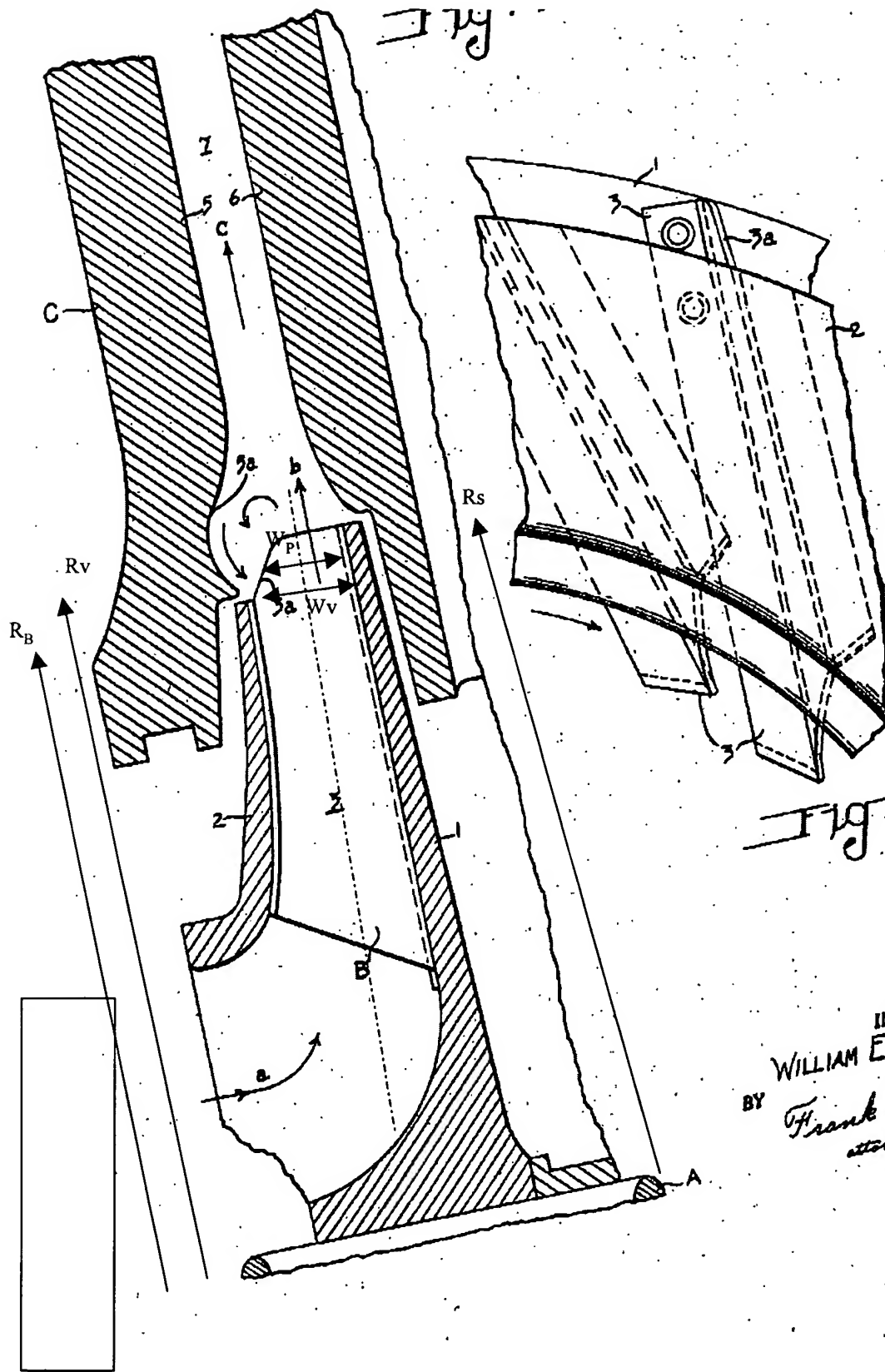


Fig. 2.

INVENTOR
 WILLIAM E. TRUP
 BY *Frank R. He*
 attorney